

**CONTAINER DEVICE WITH A ROTATING MEMBER CONNECTED ROTATABLY  
TO A CONTAINER**

**CROSS-REFERENCE TO RELATED APPLICATION**

This application claims priority of Taiwanese  
5 Application No. 092201285, filed on January 23, 2003.

**BACKGROUND OF THE INVENTION**

**1. Field of the Invention**

This invention relates to a container device, and more  
particularly to a container device that includes a rotating  
10 member connected rotatably to a container.

**2. Description of the Related Art**

Normally, a conventional container is used solely to  
contain articles or liquid, and is monotonous in  
appearance.

15 **SUMMARY OF THE INVENTION**

The object of this invention is to provide a container  
device that has an attractive and interesting structure.

According to this invention, a container device  
includes a container having a wall that defines an  
20 accommodating space therein, and a rotating member  
connected rotatably to an outer surface of the wall of the  
container so as to make the structure of the container  
device attractive and interesting.

**BRIEF DESCRIPTION OF THE DRAWINGS**

25 These and other features and advantages of this  
invention will become apparent in the following detailed  
description of the preferred embodiments of this invention,

with reference to the accompanying drawings, in which:

Fig. 1 and 2 illustrate the first preferred embodiment of a container device according to this invention;

5 Fig. 3 illustrates the second preferred embodiment of a container device according to this invention;

Fig. 4 illustrates the third preferred embodiment of a container device according to this invention;

Fig. 5 illustrates the fourth preferred embodiment of a container device according to this invention;

10 Fig. 6 illustrates the fifth preferred embodiment of a container device according to this invention;

Fig. 7 illustrates the sixth preferred embodiment of a container device according to this invention;

15 Fig. 8 illustrates the seven preferred embodiment of a container device according to this invention;

Fig. 9 illustrates the eighth preferred embodiment of a container device according to this invention;

Fig. 10 illustrates the ninth preferred embodiment of a container device according to this invention;

20 Fig. 11 illustrates the tenth preferred embodiment of a container device according to this invention;

Fig. 12 illustrates the eleventh preferred embodiment of a container device according to this invention;

25 Fig. 13 illustrates the twelfth preferred embodiment of a container device according to this invention;

Fig. 14 illustrates the thirteenth preferred embodiment of a container device according to this invention;

Fig. 15 illustrates the fourteenth preferred embodiment of a container device according to this invention;

Fig. 16 illustrates the fifteenth preferred embodiment of a container device according to this invention;

5 Figs. 17 and 18 illustrate the sixteenth preferred embodiment of a container device according to this invention;

Fig. 19 illustrates the seventeenth preferred embodiment of a container device according to this invention; and  
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Fig. 20 illustrates the eighteenth preferred embodiment of a container device according to this invention.

#### **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS**

Before the present invention is described in greater detail in connection with the preferred embodiments, it  
15 should be noted that similar elements and structures are designated by like reference numerals throughout the entire disclosure.

Referring to Figs. 1 and 2, the first preferred  
20 embodiment of a container device according to this invention is shown to include a container 11 and a rotating member 12. The container 11 is shaped as a cup, and has a cylindrical wall 111 that defines an accommodating space 112 therein and that is formed with an annular outer surface 113, and an integral shaft 114 that extends radially and  
25 outwardly therefrom and that has an enlarged outer end 115. The rotating member 12 has a central hole 121, and is shaped

as a vertical disk that is sleeved rotatably around the shaft 114 and that is confined between the enlarged outer end 115 of the shaft 114 and the annular surface 113 of the wall 111 of the container 11. As such, the rotating member 12 is rotatable about a rotating axis that extends along a radial direction of the wall 111 of the container 11. A plurality of numerals 122 are indicated on an outer surface of the rotating member 12, and are arranged along a circumferential direction of the rotating member 12.

Interconnection structure between the container 11 and the rotating member 12 can be changed. For example, referring to Fig. 3, the outer surface 113 of the wall 111 of the container 11 is formed with a circular restricting cavity 116. The center of the rotating member 12 is formed with an integral shaft 123 that has an enlarged round end 124 which is confined within and which is disposed rotatably within the cavity 116 in the outer surface 113 of the wall 111 of the container 11.

The structure of the container 11 can be modified into a penholder shown in Fig. 4, a stationery case shown in Fig. 5 that includes two rotating members 12 each sleeved rotatably around a horizontal shaft 114 on a planar vertical outer surface 113 of the wall 111 of the container 11, a water bottle shown in Fig. 6, a beverage bottle shown in Fig. 7, a vase shown in Fig. 8, and a toothbrush/toothpaste holder shown in Fig. 9.

Fig. 10 shows another embodiment of a container device

according to this invention, which is similar to the embodiment shown in Fig. 3 in construction except that the circular restricting cavity 116 is formed in a generally semi-spherical coupling member 13 that is press fitted within a circular hole 117 in the wall 111 of the container 11.

Fig. 11 shows another preferred embodiment of a container device according to this invention, which is similar to the embodiment shown in Fig. 2 in construction except that the shaft 114 has an inner end that is opposite to the enlarged outer end 115 and that is formed with an integral mounting portion 114' which is shaped as a vertical plate, and which is adhered to the outer surface 113 of the wall 111 of the container 11. The area of the mounting portion 114' can be increased, as shown in Fig. 12.

Fig. 13 shows another preferred embodiment of a container device according to this invention, which is similar to the embodiment shown in Fig. 11 in construction except that the mounting portion 114' of the shaft 114 is shaped as a hollow cylinder which is mounted adhesively within a circular recess 118 in the outer surface 113 of the wall 111 of the container 11. The position of the hollow cylindrical mounting portion 114' of the shaft 114 can be changed, as shown in Fig. 14, in which the mounting portions 114' is shaped as a cap that is sleeved around an open upper end of the container 11 in a tight fit manner. The shaft 114 extends upwardly from the center of the cap

such that the rotating member 12 is shaped as a horizontal disk that is sleeved rotatably around the shaft 114 and that is confined between the enlarged outer end 115 and the mounting portion 114' of the shaft 114.

5        Fig. 15 shows another preferred embodiment of a container device according to this invention, which includes a container 11 that is formed with a circular recess 118 and an annular groove 119, and a rotating member 12 that is formed with an outer flange 123. The circular  
10        recess 118 is formed in the outer surface 113 of the wall 111 of the container 11. The annular groove 119 is formed in a portion of the wall 111 of the container 11 defining the circular recess 118. The rotating member 12 is shaped as a vertical disk, and is received rotatably within the  
15        circular recess 118. The outer flange 123 of the rotating member 12 is received rotatably within the annular groove 119 in the wall 111 of the container 11.

      Fig. 16 shows another preferred embodiment of a container device according to this invention, which is  
20        similar to the embodiment shown in Fig. 3 in construction except for the addition of a transparent cover 14. The transparent cover 14 is press fitted within a recess 118 in the outer surface 113 of the wall 111 of the container 11 so as to cover the rotating member 12.

25        Figs. 17 and 18 show another preferred embodiment of a container device according to this invention, which is similar to the embodiment shown in Fig. 16 in construction

except for the addition of an air valve unit 15 and which includes a deeper circular recess 118 and a smaller-sized transparent cover 14. The air valve unit 15 includes an air valve 151 disposed within the wall 111 of the container 11 and having an air spray port 152 directed toward an annular surface 125 of a periphery of the rotating member 12, and a spring-biased push rod 153 mounted operably on the wall 111 of the container 11 and operable to force air from the spray port 152 of the air valve 151 toward the annular surface 125 of the rotating member 12 so as to rotate the rotating member 12 within the circular recess 118 in the outer surface 113 of the wall 111 of the container 11.

Fig. 19 shows another preferred embodiment of a container device according to this invention, which is similar to the embodiment shown in Fig. 16 in construction except for the addition of an annular groove 113', a transparent annular cover 16, a liquid 17, a plurality of movable bodies 18, a liquid valve 19, and a spring-biased push rod 20. The annular groove 113' is formed in the outer surface 113 of the wall 111 of the container 11. The transparent annular cover 16 is attached fixedly to the wall 111 of the container 11 so as to cover the annular groove 113' in the outer surface 113 of the wall 111 of the container 11, thereby defining a liquid channel 21 between the wall 111 of the container 11 and the transparent annular cover 16. The channel 21 is filled with the liquid 17. The movable bodies 18 are disposed movably within the

17 in the channel 21. The liquid valve 19 is disposed within the wall 111 of the container 11, and is in fluid communication with the liquid channel 21. The spring-biased push rod 20 is mounted operably on the wall 111 of the container 11, and is operable to create a liquid current within the channel 21 so as to move the movable bodies 18 in the channel 21.

Fig. 20 shows another preferred embodiment of a container device according to this invention, which includes a container 11 that has a container body 110, a base 110', and a post 110" having two ends connected respectively to the container body 110 and the base 110'. The rotating member 12 is shaped as a horizontal disk that is sleeved rotatably around the post 110".

With this invention thus explained, it is apparent that numerous modifications and variations can be made without departing from the scope and spirit of this invention. It is therefore intended that this invention be limited only as indicated by the appended claims.